

REMARKS

Claims 5-13, 16, 17 and 19-21 are now pending in the application. Claims 5-8 and 12-13 stand rejected under 35 U.S.C. §102. Claims 5, 7, 9-11, 16-17 and 19-20 stand rejected under 35 U.S.C. §103. These rejections are respectfully traversed. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 5-8 and 12-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bompard (U.S. Pat. No. 4,257,835). This rejection is respectfully traversed.

It is well established that for a claim to be anticipated by a reference, each and every element of the claim must be found in the reference. Bompard discloses a material formed of a plurality of layers of parallel fibers stacked and then impregnated with a resin. Bompard does not disclose a coupled fiber reinforcement structure formed of a high aspect ratio fiber and having an aspect ratio of less than ten, wherein said coupled fiber reinforcement structure comprises a first and second pair of parallel fibers, said first and second pair being coupled orthogonal to each other, as required by claim 5. Specifically, the layers of fibers of Bompard are not coupled to one another to form a reinforcement structure. In the molded material of Bompard, once a resin has been added, the fibers behave independently in reinforcing the material along their particular longitudinal direction, and are held in place during forming by a number of pins holding the respective layers of fibers. Therefore, the material of Bompard does not comprise a coupled fiber reinforcement structure as required by claim 5, and claim 5 cannot be anticipated by Bompard. Withdrawal of the rejection, and reconsideration and reexamination, of claim 5 is respectfully requested. Claims 6-8 and 12-13, which depend from claim 5, cannot be anticipated by Bompard for the same reason that claim 5 is not anticipated. Withdrawal of the rejection of claims 6-8 and 12-13, and reconsideration and reexamination of the claims, is respectfully requested.

3/8/2004

REJECTION UNDER 35 U.S.C. § 103

Claims 5, 7 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bompard in view of Moghe et al. (U.S. Pat. No. 5,127,783). This rejection is respectfully traversed.

The combination of Bompard and Moghe et al. is not tenable. Bompard discloses a rather fixed and systematic method of stacking layers of reinforcing fiber for receipt of a resin. Moghe et al. discloses a carbon composite fastener including a core, a fiber containing thread-defining element bonded to the exterior of the core, and a reinforcing fabric layer securing the thread defining element to the core. A method of weaving the fabric layer is also disclosed. These two references are directed to very different applications of fiber reinforcement, and applying the teachings of one to the other is inappropriate.

Even if the references are combined, however, the combination still does not reach the invention as claimed. As discussed above, claim 5 cannot be anticipated by Bompard because each and every element of the claim is not disclosed therein. The combination of Bompard and Moghe et al. still does not reach the invention of claim 5 because the combination does not contain each and every element of the claim. Moghe et al. does not disclose the coupled reinforcement structure that is missing from Bompard. Claim 5 must therefore be patentable over the combination of Bompard and Moghe et al. Therefore, withdrawal of the rejection of claim 5, and reconsideration and reexamination of the claim, is respectfully requested. Claims 7 and 9, which depend from claim 5 and contain every limitation found therein, must also be patentable over the combination of Bompard and Moghe et al. Therefore, withdrawal of the rejection of claims 7 and 9, and reconsideration and reexamination of the claims, is respectfully requested.

Claims 5, 10-11, 16-17 and 19-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bompard in view of Segal et al. (U.S. Pat. No. 3,920,879). This rejection is respectfully traversed.

Bompard and Segal et al. are both directed to a formation of material by the laying of reinforcement and bonding the reinforcement within a resin. The combination of Bompard and Segal et al. do not disclose a coupled fiber reinforcement structure

comprising a first and second pair of parallel fibers, said first and second pair being coupled orthogonal to each other, as required by claim 5, nor does the combination disclose a pair of fibers adjoined by a joint, said joint maintaining the coupled fiber reinforcement structure during a molding process; wherein said coupled fiber reinforcement structure has an aspect ratio of less than ten and comprises a first and second pair of parallel fibers, said first and second pair being coupled orthogonal to each other, as required by claim 16. With specific reference to the teaching of Segal et al. and the length of fibers feasible for use in an injection molding process, Segal et al. teaches the use of fibers in excess of 2 inches for building strength, in contravention to language of claim 19, which cites a fiber length of 0.2 to 0.8 millimeters. This teaching, away by Segal et al. further supports the assertion that the combination of Bompard and Segal et al. does not reach the limitations of the claims. Therefore, withdrawal of the rejection of claims

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 944-6522.

Respectfully submitted,

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